1 CLAIMS

2 What is claimed is:

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4 1. A stand-alone device for determining communication parameters and channel

5 configuration of an asynchronous serial device comprising:

6   a. at least one microprocessor having at least one connector means; at least

7 one DTE Driver and or at least one DCE Driver receiving inputs from the said at least

8 one connector means and providing outputs to said at least one connector means; the

9 said at least one DTE Driver and or at least one DCE Driver having outputs to at least

10 one UART and or at least one pulse width detector; the said at least one DTE Driver

11 and or at least one DCE Driver receiving inputs from the said at least one UART and

12 or the said at least one pulse width detector; the said at least one UART and or the

13 said at least one pulse width detector providing outputs to and receiving inputs from

14 the at least one microprocessor;

15

16   b. the at least one microprocessor having memory; the memory receiving from

17 the at least one connector means at least one computer program script; at least one

18 display means receiving input from the at least one microprocessor; power means for

19 operation of the microprocessor;

20   c. the at least one microprocessor communicating with or interrogating with

21 the at least one computer program script, by the at least one connector means, at least

22 one asynchronous serial device;

23

24   d. the at least one microprocessor receiving or not receiving, by the at least

25 one connector means, a signal from the at least one asynchronous serial device; the

26 signal or no signal from the at least one asynchronous serial device is detected by

27 either the at least one DTE Driver or the at least one DCE Driver; the output from

28 either the at least one DTE Driver or the at least one DCE Driver is communicated to

29 the at least one UART and the at least one pulse width detector; the output from the

30 at least one UART and the at least one pulse width detector is communicated by

electronic means to the at lease one microprocessor; if a signal exists (270) then the at

1 lease one microprocessor displays the at the at least one display; if there is not a

2 signal or the signal is non-standard then the at least one microprocessor displays that

3 a signal is not found (260) at the at least one display (110);

4   e. if a signal exists (270) the computer program script operates the

5 microprocessor to set the baud rate of the test to the lowest value (280) and begins the

6 selected script (290) for all combinations of parity and data bits at the test baud rate

7 based on the user configuration of the script; if the script is successful (300) it is an

8 indication that the communication parameters were correct for the tested parameters

9 and the results are displayed (110); if the appropriate response is detected then at least

10 one microprocessor displays the current baud rate, data bits, and parity and the baud

11 rate, data bits and parity are considered correct

12

13   f. as communication (i.e. an ASCII character prompt) is received from the

14 connected device (700) the pulse width detector (100) reports the widths of each

15 pulse; if the minimum pulse width detected is less than half of what is indicated by

16 the maximum baud rate of 230,400 the pulse is considered noise and ignored; if the

17 script fails (310) and the pulse width detector (100) indicates that the data is being

18 transmitted at a higher rate (320, 325) than the present test, the computer program

19 script operates on the microprocessor to shift the baud rate to the higher baud rate

20 (330) and operate the script again (290); if the script fails (310) and the at least one

21 pulse width detector (100) does not indicate that the data is being transmitted at a

22 higher rate (320, 327) than the present test, the computer program script operates the

23 microprocessor to shift the baud rate to the next higher baud rate (340) that is

24 available and runs the script again (290); this process is repeated until the script is

25 successful (300) or there are no more baud rates to try (350);

26   g. when the script is successful (300) and the baud rate is determined the at

27 least one microprocessor operates the at least one display to display the baud rate and

28 or associated communication parameters.

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